

FIG. 1A

```
179 191 182 134 1381 19108 132 206 124 131 98 115 111 105 129
155100103164219193 43 75 84 66 73 230 40
108162176205 78 0 28 29 24 11
                                  0
                                     31 18 37
153 167 240 41 28 81 194198 217 194 227 78 39
                                           28
                                               216
149 186 255 75 20 248 166 177 182 165 189 231 79 38
177236 49 15 47
                            11 120 166 248 43 53
183254 54 15 251179108119 193175 120 106 203 250 191 156
177.204 46 34 195164109177239200197 95 114 95 138 128
165 238 701 7
             209179101208 47 64 41 47 66 51 66 196
170216 54 14 218167117205 53 16 21
                                               48
                                                  236
186218 7
                199126108215244198239
                                            8
                                               255189
147 165 209 46
             22
                232224 5 5 28 2 250 6 4 2 240 128
159 175 228 17 26
                79 40
                       244 247 199 209 200 32 81
                                               247
122 148 165 210 76
                    ^{2}
105 101 107 17/2241234 66 16 25 23
                                 20 44
                                        226209171135
176 168 PA 138130 11 195218252241205222 PA 108 PA 138
250201244245203131 98 118 94 122 101131125227206
```

FIG. 1B

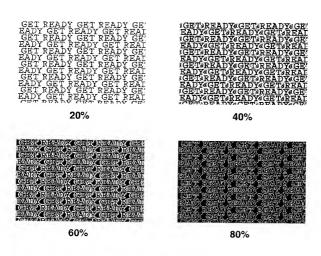
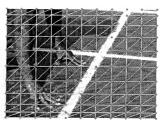


FIG. 2



## Warping grid





Mask

FIG. 4



FIG. 5

Dithered image

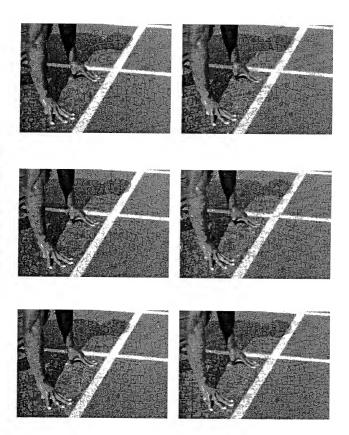
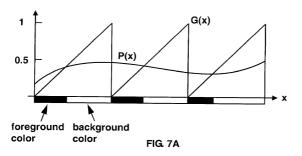


FIG. 6



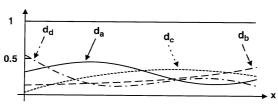
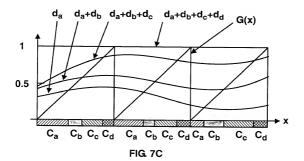
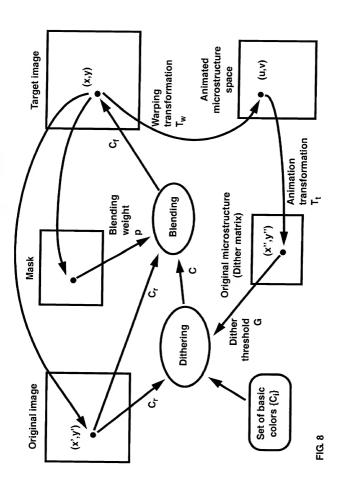
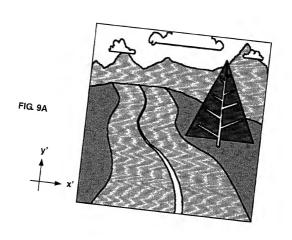
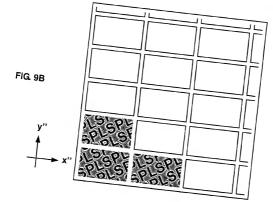


FIG. 7B









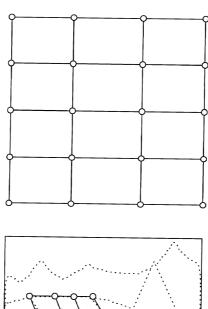
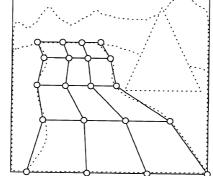


FIG. 10B

FIG. 10A



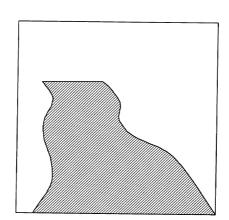


FIG. 11A

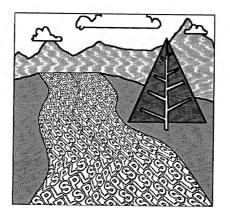


FIG. 11B

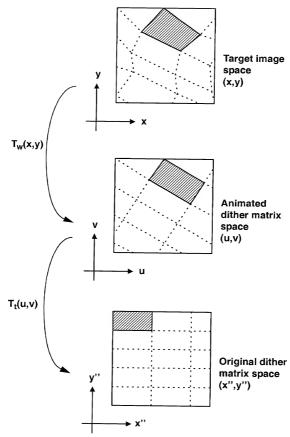
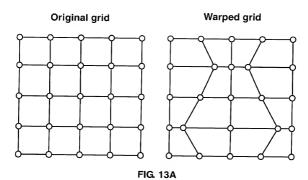


FIG. 12



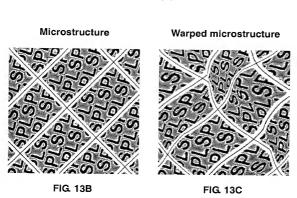


FIG. 14A

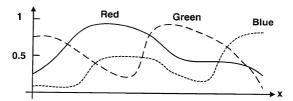
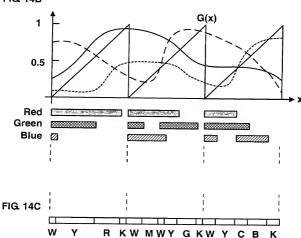


FIG. 14B



R: Red

C: Cyan

W: White

G: Green B: Blue M: Magenta Y: Yellow K: Black

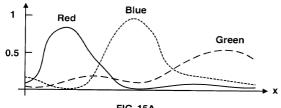
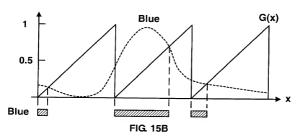


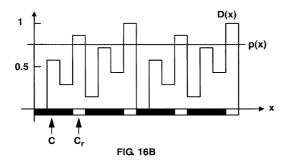
FIG. 15A



Blue Red Green 0.5 FIG. 15C

0	8	2	10
12	4	14	6
3	11	1	9
15	7	13	5

FIG. 16A



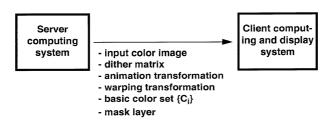


FIG. 17

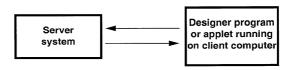


FIG. 18

Designer logs himself on server synthesizing system

Designer creates the animated microstructure image on his computer by interacting with the server

Designer signs a licensing agreement and is authorized to obtain the designed data elements and the animated microstucture rendering software

FIG. 19

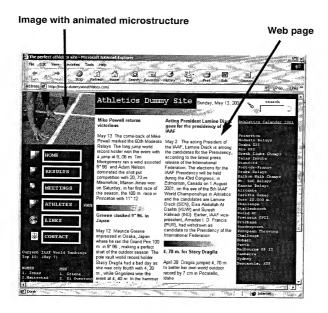


FIG. 20